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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,237	12/19/2001	Andrew Paul Chapple	C7592(V)	7388

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UNILEVER  
PATENT DEPARTMENT  
45 RIVER ROAD  
EDGEWATER, NJ 07020

EXAMINER

KUMAR, PREETI

ART UNIT PAPER NUMBER

1751

DATE MAILED: 12/05/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/025,237	Applicant(s) CHAPPLE ET AL.	
	Examiner Preeti Kumar	Art Unit 1751	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is FINAL.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. Claims 1-12 are pending.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claim 1, the phrase "consisting essentially of" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claims 3, 5, 11 and 12, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

The term "polymeric binder" in claim 4 is a relative term which renders the claim indefinite. The term "polymeric binder" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite meaning of the terminology, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Beggs et al. (US 6,218,350).

Beggs et al. teach bleaching enzymes capable of generating a bleaching chemical and having a high binding affinity for stains present on fabrics. The invention also relates to a detergent composition comprising said enzymes and to a process for bleaching stains present on fabrics. See abstract. Beggs et al. teach that the new bleaching enzyme has a high binding affinity for stains present on fabrics. It may be that one part of the polypeptide chain of the bleaching enzyme is responsible for the binding affinity, but it is also possible that the enzyme comprises an enzyme part capable of generating a bleaching chemical which is coupled to a reagent having the high binding affinity for stains present on fabrics. See col.3, ln.30-50.

Beggs et al. also teach a class of antibodies formed by the Heavy Chain antibodies as found in Camelidae, like the camel or the llama. The binding domains of

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these antibodies consist of a single polypeptide fragment, namely the variable region of the heavy chain polypeptide (HC-V). In contrast, in the classic antibodies (murine, human, etc.), the binding domain consist of two polypeptide chains (the variable regions of the heavy chain and the light chain. Methods for producing fusion proteins that comprise an enzyme and an antibody or that comprise an enzyme and an antibody fragment are already known in the art. See col.4, ln.40-55.

Beggs et al. teach that bleaching enzymes can be used in a detergent composition, specifically suited for stain bleaching purposes. To that extent, the composition comprises a surfactant and optionally other conventional detergent ingredients. Beggs et al. teach that an enzymatic detergent composition which comprises from 0.1-50% by weight, based on the total detergent composition, of one or more surfactants. This surfactant system may in turn comprise 0-95% by weight of one or more anionic surfactants and 5-100% by weight of one or more nonionic surfactants. Beggs et al. teach suitable anionic detergent compounds which may be used are sodium and potassium alkyl sulphates, especially those obtained by sulphating higher C8 -C18 alcohols, produced for example from tallow or coconut oil, sodium and potassium alkyl C9 -C20 benzene sulphonates, particularly sodium linear secondary alkyl C10 -C15 benzene sulphonates. See col.7, ln.45-55.

Specifically regarding the chemical equilibrium constant, Beggs et al. teach that the compound should bind the stain, or the stained material, with a  $K_d$  lower than  $10^{-5}$  M, preferably lower than  $10^{-6}$  M and could be  $10^{-10}$  M or even less. See col.4, ln.20-30.

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In example 5, Beggs et al. illustrate targeted bleaching of red wine stain with an antibody/glucose oxidase conjugate made up of (150 mM glucose, 30 mM NaCl, 0.5% COCO 6.5 EO, 0.1M Phosphate (pH 6.5)). The tubes were shaken for 15 minutes at room temperature (to mix thoroughly and to allow the conjugates to bind) and then incubated for 25 minutes at 37o C. to allow bleaching to occur. See col.10.

Beggs et al. do not specifically teach an antibody granule granulated with an alkali metal salt as recited by the instant claims.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to formulate an antibody granule granulated with an alkali metal salt as recited by the instant claims, with a reasonable expectation of success, because the teachings of Beggs et al. suggest a bleaching composition comprising an antibody and an alkali metal salt and the other requisite limitations as recited by the instant claims. The prior art differs from the instant claims in that there is no teaching of the step of granulating the alkali metal salt with the antibody. However, the examiner asserts that the teachings of Beggs et al. suggest the combination of an antibody and an alkali metal salt in a detergent composition and thereby the teachings of Beggs et al. encompass the material limitations of the instant claims.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above.

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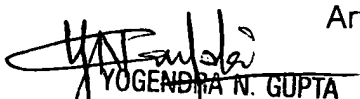
Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-872-9309.

Preeti Kumar  
Examiner  
Art Unit 1751

PK  
November 27, 2002

  
YOGENDRA N. GUPTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700